

ABSTRACT OF THE DISCLOSURE

Disclosed are adhesive formulations as creping process aids for producing an absorbent creped cellulosic sheet having a high level of surface-perceived softness that comprises continuously forming a web of cellulosic papermaking fibers, adhering said web to a thermal drying means by means of adhesive compositions comprising polymers having at least one primary or secondary amine group in the backbone such as chitosan, polyvinylamine, polyvinyl alcohol-vinyl amine and polyaminoamide in combination with crosslinking agents such as dialdehydes or zirconium compounds having a valence of plus four including ammonium zirconium carbonate, zirconium acetylacetone, zirconium acetate, zirconium carbonate, zirconium sulfate, zirconium phosphate, potassium zirconium carbonate, zirconium sodium phosphate and sodium zirconium tartrate and creping said treated web from said thermal drying means. In the method for producing the absorbent creped cellulosic sheets, the zirconium crosslinking agent is advantageously applied directly and separately on the Yankee dryer at the time the base polymer is applied to the surface. Alternatively, when using dialdehydes, the dialdehydes are mixed with the base polymer just prior to application to the Yankee dryer surface without having the crosslinking reaction take place with the base polymer prior to reaching the heated Yankee surface. These sheets are useful in the manufacture of tissue and towel.